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SHAH, PARAS D

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/714,690	<b>Applicant(s)</b> BAGLEY ET AL.	
	<b>Examiner</b> Paras Shah	<b>Art Unit</b> 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This communication is in response to the Arguments filed on 02/05/2008. Claims 1-12 remain pending and have been examined. The Applicants' amendment and remarks have been carefully considered, but they are not persuasive and do not place the claims in condition for allowance. Accordingly, this action has been made FINAL.
2. All previous objections and rejections directed to the Applicant's disclosure and claims not discussed in this Office Action have been withdrawn by the Examiner.

### ***Response to Arguments***

3. Applicant's arguments see pages 2-10, filed 01/30/2008, with respect to the rejection(s) of claim(s) 1-12 have been fully considered but they are not persuasive.

As to the first argument regarding claim 1, the Applicants argue that the motivation for combining the references Kiyama in view of Ho is unsupported by the teachings, where the rationale for combining was due to a reduction in memory. The Examiner traverses this argument. In the office action dated 10/30/2007, a motivation was provided that also included that would allow for quicker retrieval in a large information setting (see Ho col. 2, lines 10-15 and lines 23-40). Further, since the reference uses three different dictionaries. The Examiner withdraws the motivation for reduction in memory but maintains the motivation that quicker retrieval and an appropriate response based on the category is retrieved (see Ho col. 2, lines 10-40). Hence, the combination of Kiyama in view of Ho teaches the cited limitations of claim 1. In response to applicant's argument that the examiner's conclusion of obviousness is

based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

As to the second argument regarding claims 3 and 8, the Applicants argue that Kiyama does not teach the “phrases” being included or the “selected portion.” The Examiner traverses this rejection. In the former argument that phrase is not taught in cited reference is traversed. the broad definition of the word phrase extracted from the WordNet Princeton dictionary yields (<http://wordnet.princeton.edu/perl/webwn?s=phrase>) yields a phrase is a expression consisting of one or more words...). Hence, the cited reference does teach the locating of words and phrases (see col. 4, lines 58-62, words). Further, the selection of the words is made obvious in the reference as seen in Figure 3. In step 12, data of one text sequence from the text data is extracted and processing occurs. Hence, from the figure it is apparent that a selection is being done since a specific portion of text is processed and then the next sequence occurs. Further, the use of selection would have been realistically been done by one skilled in the art from the suggestion as taught by Kiyama. Please see the KSR decision for obviousness regarding an alternative method to produce a predictable result of choosing a text sequence (see KSR, rationale B).

As to the third argument regarding claims 5-6 and 10-11, the Applicants argue that since all of the words are added to the list of keyword candidates there would be no need to add to the list of keyword candidates. Further, applicants argue that the Examiner has failed to show why distinguishing words would be valuable with the regard to the invention of Kiyama. The Examiner traverses this argument. In the proposed combination of Kiyama in view of Yoshimi, Yoshimi presents the detection of variation in font attributes for location of important words (see col. 13, lines 1-35). The result is then stored. Kiyama would benefit from the teachings of Yoshimi in order to determine the keyword candidates. Referring to the Kiyama reference, in col. 4 lines 58-64, text is divided and looked up in a dictionary before being registered in a word partitioning table. However, Yoshimi teaches an alternative method of detecting words, aside from using a dictionary to detect important words. In col. 9, lines 42-48, dictionary is used to detect important words based on parts of speech. However, as described in col. 12, lines 45-col. 13, lines 35, an alternative recognizing of important words is shown, namely font attributes. Hence, The combination of Kiyama in view of Yoshimi would have been obvious to one skilled in the art to detecting keywords based on font characteristics.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1, 3, 7, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyama *et al.* (US 5,642,518) in view of Ho *et al.* (US 6,571,240).

As to claim 1, Kiyama *et al.* teaches a keyword generation system comprising:

a content parser configured to parse individual words and phrases in a selected portion of content (see col. 4, lines 58-60) (e.g. The dividing of the words from the text is equivalent to a parser);

a dictionary of words and phrases (see col. 4, line 60) (e.g. A dictionary is being used when words are divided.) to a particular domain depending on the word detected).;

a list of keyword candidates comprising a plurality of words and phrases specific to said particular domain (see col. 4, lines 66-67) (e.g. A keyword list is generated of the detected words corresponding to specific domains (see Figure 9);

a counter for each of said words and phrases in said list (see col. 4, lines 64-65) (e.g. a frequency of occurrence is equivalent to a counter since both are directly proportional to each other. Further, once a keyword is detected the count increases (see Figure 9, element w3); and,

a keyword generation process (see Figure 2, element 70) both coupled to each of said content parser (see Figure 2, element 10), dictionary (see col. 4, line 60) , said list (see Figure 2, elements 20 and 30), and said counter (see Figure 2, element 20 and 30) and also programmed (see col. 6, lines 22-39) (e.g. The use

of a processor implies the programming portion) to identify said words and phrases specific to said particular domain in said selected portion of content (see Figure 2, element 30 and col. 5, lines 1-4 and Figure 9) (e.g. From Figure 9, the occurrence frequencies are identified as well as the domain as seen by the element columns, w3), to write said identified words and phrases to said list of keyword candidates (see col. 5, lines 5-7) (e.g. The extracted keywords are stored for new keywords and existing keywords are already in the dictionary (see Figure 9, element column, w1)) , to increment said counter for each of said words and phrases in said list each time said keyword generation process locates each of said words and phrases in said selected portion of content (see col. 5, lines 48-55) (e.g. In this cited portion the, word occurrence frequencies are updated depending on the word and incremented by domain and shown in Figure 9), and to select one or more of said words and phrases in said list as keywords for said content based upon said counter for each of said words and phrases in said list (see col. 11. lines 59-65 and Figure 18) (e.g. The assignment of the keywords shows the selection of the keywords based on the occurrence frequency. The latter citation shows the keywords assigned).

However, Kiyama *et al.* does not specifically teach the dictionary specific to a particular domain.

Ho *et al.* does teach a dictionary of words and phrases specific to a particular domain (see col. 6, lines 62-col. 7, lines 3, domain specific dictionary) associated with the text (see col. 4, lines 40-50, phrases from documents).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the keyword generation systems as taught by Kiyama *et al.* with the inclusion of a domain-specific dictionary as taught by Ho *et al.*. The motivation to have included such a dictionary is for quicker retrieval (see col. 4, lines 20-23) for information related to a specific domain and to include commonly used terms and meanings in a particular domain (see col. 6, lines 62-col. 7, lines 3) for reduction in memory as would be apparent to one skilled in the art.

6. Claims 3, 8, 7, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyama *et al.*

As to claims 3 and 8, Kiyama *et al.* teaches a keyword generation method comprising the steps of:

locating words and phrases (see col. 4, lines 58-60) in a selected portion of content (see Figure 3, obtain data of one text sequence 12), said words and phrases being specific to a particular domain (see col. 1, lines 4-5) (e.g. In the reference that keywords associated with a domain type is extracted and is thus specific to a particular domain depending on the word detected).

adding a single instance of each of said located words and phrases to a list of keyword candidates (see col. 5, lines 5-7);

for each located word and phrase which already had been added to said list of keyword candidates, incrementing a counter associated with said located



word and phrase (see col. 4, lines 64-65) (e.g. a frequency of occurrence is equivalent to a counter since both are directly proportional to each other. Further, once a keyword is detected the count increases (see Figure 9, occurrence frequency w3); and,

selecting keywords from said list of keyword candidates based upon words and phrases in said list (see col. 11. lines 59-65 and Figure 18) (e.g. The assignment of the keywords shows the selection of the keywords based on the occurrence frequency. The latter citation shows the keywords assigned.) having a highest counter value (see Figure 17) (e.g. From the Figure, if the keyword has not been seen more than one time then it is assigned as the keyword to the specific domain. If it is has only been seen once then it is not assigned) (see Figure 18 and Figure 16, example)).

Kiyama *et al.* does not specifically teach selecting portion of content.

It would have been obvious to modify the keyword generation as taught by Kiyama *et al.* with the selection of a portion of the text for the purpose of an alternative method to obtain textual data from the entire text on hand.

As to claims 7 and 12, Kiyama *et al.* teaches

the step of repeated performing the locating, adding and incrementing steps for selected chunks of said selected portion of content until no content remains to be processed (see Figure 3, elements, 1, 11-16) (e.g. From the Figure, it is seen that the text is retrieved and processing is done until the text is

completed (see Figure 4, sample document). It is obvious that the processing ends once all text has been analyzed.).

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyama *et al.* in view of Ho *et al.* as applied to claim 1 above, and further in view of de Hita *et al.* (US 6,081,774).

As to claim 2, Kiyama *et al.* in view of Ho *et al.* teach all of the limitations as in claim 1, above.

However, Kiyama *et al.* in view of Ho *et al.* does not specifically teach the use of a list of common words for keyword generation.

de Hita *et al.* does teach the use of list of common words (see col. 3, lines 4-8) (e.g. pattern dictionary) coupled to keyword generation process (see col. 3, lines 51-61).

It would have been obvious to one of ordinary skilled in the at the time the invention was made to have modified the key word generation taught by Kiyama *et al.* with the inclusion of word removal common to keywords as taught by de Hita *et al.* The motivation to have combined the two references involves the inclusion of context dependent information related to semantic relationships (see de Hit a *et al.*, col. 3, lines 3-8) in order to merge expressions that are similar (see de Hita *et al.*, col. 2, lines 9-13) for faster processing.

8. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyama *et al.* as applied to claim 3 above, and further in view of de Hita *et al.* (US 6,081,774).

As to claims 4 and 9, Kiyama *et al.* teaches all of the limitations as in claim 3, above.

However, Kiyama *et al.* does not specifically teach removing from consideration every word and phrase in said list of keyword candidates that are common.

de Hita *et al.* does teach removing from consideration the keywords and words common in nature (see col. 3., lines 51-61 and see col. 11, lines 8-19) (e.g. From the cited sections it is the synonyms for the word or token is retrieved, which is one of the problems the reference tries to solve (see col. 2, lines, 11-14).

It would have been obvious to one of ordinary skilled in the at the time the invention was made to have modified the key word generation taught by Kiyama *et al.* with the inclusion of word removal common to keywords as taught by de Hita *et al.* The motivation to have combined the two references involves the inclusion of context dependent information related to semantic relationships (see de Hit a *et al.*, col. 3, lines 3-8) in order to merge expressions that are similar (see de Hita *et al.*, col. 2, lines 9-13) for faster processing.

9. Claims 5, 6, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyama *et al.* in view of Yoshimi *et al.* (US 6,374,209).

As to claims 5 and 10, Kiyama *et al.* teaches all of the limitations as in claims 3 and 8, above.

Furthermore, Kiyama *et al.* teaches selecting a string (e.g. word) in said selected portion of content (see Figure 3, elements 1 and 11-16) (e.g. The input text is the selection and words are extracted. It would have been obvious to select textual portions as an alternative means to obtain a sequence of data.);

adding said string to said list of keyword candidates (see col. 5, lines 5-10) (e.g. The comparison to the collection and the negligible word dictionary is made and added if the respective word is not found in the collection or negligible word dictionary);

However, Kiyama *et al.*, does not specifically teach the detecting a variation in font attributes.

Yoshimi *et al.* does teach the detecting of words based upon font attributes (see col. 13, lines 1-35, character ornament, style and size is detected for important word).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the key word generation taught by Kiyama *et al.* with the inclusion of font detection as taught by Yoshimi *et al.* The motivation to have combined the two references involves the distinction between important words and unimportant words comparing other words in the text [see Yoshimi *et al.*, col. 13, lines 1-35) for faster retrieval of possible keywords, which benefits the keyword generation presented by Kiyama *et al.* by detecting

keywords denoted by font to be important as an alternative method for keyword detection.

As to claims 6 and 11, Kiyama *et al.* in view of Yoshimi *et al.* teach all of the limitations as in claims 5 and 10, above.

Furthermore, Yoshimi *et al.* teaches the extraction of important words based on font (see col. 13, lines 1-35, character ornament, style and size is detected for important word).

Furthermore, Kiyama *et al.* teaches the step of subsequently identifying said string as a word and phrase (see col. 5, lines 48-55) , which is specific to said particular domain.(see Figure 9 and 16) (e.g. The occurrence frequency is used to determine the domain for which the keywords extracted from a text document belongs to.).

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to 11 whose telephone number is (571)270-1650. The examiner can normally be reached on MON.-THURS. 7:00a.m.-4:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paras Shah/  
Examiner, Art Unit 2626

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